Measure your Software Quality

With TIOBE’s TiCS framework you and your team can easily monitor the quality of your software projects. TiCS interprets the results of your code checking tools and aggregates all data in a clear dashboard. In one glance, the dashboard allows you to see how well your projects are performing on TIOBE’s 8 objective quality metrics using the TIOBE Quality Indicator (TQI) label.

- A: Is required when a software crash can result in a large amount of deaths, like in the defence and avionics industries.
- B: Is required when a software crash can result in death, like in the automotive and medical industries.
- C: Is required when a software crash can result in a large financial loss, like in the banking and semiconductor industry.
- D: Is required at least in all other cases, like software for administrative purposes.
- E: Indicates that your software is of insufficient quality for production.

Improving the quality of your code becomes a lot easier with TiCS: within the dashboard, you are always only a few clicks away from your annotated source code in which TiCS flags violations and areas of improvement for your team to work on. Configure your tools, set objectives and start developing high-quality code!
How it works

The 8 quality metrics TIOBE uses to assess your software quality are based on the 8 categories of the ISO 25010 standard for developing high quality software.

- **Compiler Warnings**: The amount of compiler warnings that indicate serious flaws in the design of your code.
- **Code Coverage**: The percentage of your code covered by unit tests.
- **Abstract Interpretation**: Amount of severe programming errors found in your code that may result in crashes.
- **Cyclomatic Complexity**: The amount of independent paths through your code.
- **Coding Standards**: The degree to which your code complies with coding standards.
- **Fan-out**: The amount of external modules required to run your code.
- **Code Duplication**: The percentage of your code that occurs more than once in the total system.
- **Security**: The degree of vulnerability of your code to unauthorized access and exploitation of security risks.

Benefits of using TiCS

- **OBJECTIVE**: Proof of externally assessed software code quality.
- **INFORMATIVE**: Easy-to-use quality gating and real-time dashboarding from enterprise level (all projects, multi-site) to code level.
- **COMPARABLE**: Comparison of software code quality of projects irrespective of the used technologies.
- **CONVENIENT**: Outsourcing the collection of code quality data to TIOBE specialists in order to let you focus on your core competences.

TIOBE Software checks more than 1.1 billion lines of code each day, for market leaders such as HCL, Vanderlande, Philips, Signify, TomTom, ThermoFisher Scientific, and Bosch.

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